Supplemental digital content for Lenert LA, Sakaguchi FH, Rigler SK, Weir CR. Rethinking the Discharge Summary: A Focus on Handoff Communication. Acad Med. 2013;89(3).

Supplemental Digital Appendix 1

Two examples of a discharge summary using the Situation-Background-Assessment-Recommendations (SBAR) model.

University of Utah Health Care: Discharge Summary (SBAR Handover) – Synthesized Patient

PATIENT: PATTY PARSONS **DOB:** 7/24/1971 **MRN:** 12345678
Admit Date: 8/22/2012 **Discharge Date:** 8/25/2012
Signing Physician: Jonathon Kirk, MD **Dictated by:** Lisa Jones, MD (pager 801-339-1234)
Service: General Internal Medicine
Inpatient Consults: none
Primary Care Provider: Dr. Jensen, the house physician at Peaceful Nursing Home

SITUATION

Ms. Parsons is a 41 year old female with a history of Traumatic Brain Injury, Bipolar Disorder, and Seizure disorder who lives at Peaceful Nursing Home who was admitted for accidental ASA overdose and pneumonia and is recovering well, ready for discharge.

Disposition: Peaceful Nursing Home, her residence.

Pending Results: None
Follow-up Labs: None
Follow-up Appointments:
1) House Physician, Dr. Jensen: Evaluation of chronic pain and recovery from pneumonia.

BACKGROUND

1)Acetaminophen and ASA overdose: In addition to her prescribed Percocet, the patient ingested an unknown amount of Excedrin for a headache on 8/21/2012. The staff at the nursing home brought the patient to the ED when they learned this. Acetaminophen levels were never in the toxic range, though the exact timing of ingestion was unknown. Salicylate levels were toxic and bicarbonate therapy was initiated. Electrolytes were replaced as needed with no complications or signs of toxicity.
2)Pneumonia: The patient was diagnosed based on XRay findings, a fever of 39.0 C and a white blood cell count of 24. She was treated with Ceftriaxone and Azithromycin and is discharged on Augmentin and Azithromycin.
3) SIADH: Developed during hospital stay. Resolved with treating pneumonia and 1.5 L free water restriction.

PROCEDURES: None

VITALS	BP	Pulse	Respirations	Temp	SaO2
8/25/2012	112 / 76	94	16	36.8	95% on RA

PHYSICAL EXAM: Lungs clear, no respiratory distress.

LABS		Value	Normal Range
8/22/2012	Acetaminophen Level	24	10-30
8/23/2012	Acetaminophen Level	<10	10-30
8/22/2012	Salicylate Level	26	2-10
8/23/2012	Salicylate Level	10	2-10
8/25/2012	White Blood Cell Count	13.44	3.20-10.60
8/23/2012	CDiff	Not Detected	Not Detected

IMAGING:

Chest XRay -- Right middle lobe and left perihilar infiltrates.

HOSPITAL VACCINATIONS: None

ASSESSMENT

DISCHARGE DIAGNOSES:

1. Aspirin overdose
2. Community-Acquired Pneumonia
3. SIADH

CHRONIC DIAGNOSES:

1. Traumatic Brain Injury
2. Migraine Headaches
3. Bipolar Disorder
4. Seizure Disorder
5. Chronic Diarrhea
6. GERD

CONDITION: Good, back to baseline.

RECOMMENDATIONS

1)Pain management: Percocet 5/325 1 PO Q4Hrs and the patient is to refrain from taking her own pain medications. Recommend further development of treatment plan for acute headaches.
2)Pneumonia: Continue Augmentin twice daily through 9/1/2012 , for a total of 10 days.
3)Rectal bleeding: The patient had mild, asymptomatic rectal bleeding with no obvious hemorrhoids. Further work-up recommended for persistent bleeding.

Patient Preferences/Priorities/Goal/(Advanced Directives):

1) Patient desires relief from chronic headaches.
2) Patient is full code. However, no prolonged life support in the case of severe injury/illness.

(Medications On Next Page)

ALLERGIES: None

DISCHARGE MEDICATIONS

Continued:	**New:**
1)Tums 500mg PO 1-2 Q5Hrs prn GERD 2)Loperamide 2mg PO 8 times daily prn diarrhea 3)Promethazine 25mg PO Q6Hrs prn nausea 4)Topiramate 25mg PO QD 5)Dulcolax 10mg PR QD prn constipation 6)Digoxin 125mg PO QD 7)Vitamin C 500mg PO BID 8)Colace 100mg PO QD, hold for diarrhea 9)Multivitamin 1 PO QD 10)KCl 20mEq PO QD 11)Valproic Acid 750mg PO BID 12)Famotidine 20mg PO BID 13)Omeprazole 20mg PO BID 14)Buspirone 5mg PO Q8Hr 15)Lorazepam 1mg PO TID 16)Trazodone 150mg PO QHS 17)Citalopram 20mg PO QAM	1)Amoxicillin-Clavulanate (Augmentin) 875mg PO Q12Hrs through 9/1/2012 for pneumonia.
Changed: 1)Percocet 5/325 Take 1 PO Q4Hrs prn pain to limit total acetaminophen dose.	**Discontinued:** 1)Excedrin: Too much acetaminophen when added to prescribed percocet. 2)Acetaminophen: Too much acetaminophen when added to prescribed percocet.

I have personally reviewed the patient's medications, vital signs, laboratory and radiologic studies. Patient was personally seen and examined and discussed in detail with the housestaff.

I concur with the note as written.
I have spent 25 minutes coordinating discharge.

Jonathon Kirk MD
Hospitalist

University of Utah Health Care: Discharge Summary (SBAR Handover) – Synthesized Patient

PATIENT NAME: WILMA WATERMAN **DOB**: 08/01/1943 **MRN**: 12345678
Admit Date: 04/27/2012 **Discharge Date:** 05/04/2012
Signing Provider: Samuel Jones MD **Dictated by:** Linda Olsen, MD (pager 801-339-1234)
Service: General Internal Medicine
Inpatient Consultants: Orthopedics, Nephrology
Primary Care Provider: Dr. Herbert Smith, Ogden Family Medicine Clinic (385-123-1234)
Follow-up Specialist: Dr. Rahim, Salt Lake Nephrology Associates (385-987-9876)
Follow-up Specialist: Dr. Lee, University of Utah Orthopedics (801-587-6789)

SITUATION

Ms. Waterman is a 68-year-old lady with past medical history significant for end-stage renal dialysis on hemodialysis, type 2 diabetes, coronary artery disease status post MI, a CVA, TIA, and COPD who presented to the ER with progressive lower-extremity weakness and incontinence related to several burst fractures, was taken to the OR for nerve decompression and spinal fusion and is being discharged to skilled nursing.

Disposition: Newroads Skilled Nursing Center where she had been previously residing.

Pending Results: None
Follow-up Labs: Vitamin D level in early June 2012.
Follow-up Appointments:
1) Orthopedics Clinic, by Dr. Lee in the Orthopedic Center on May 17, 2012 at 10:15 a.m. Phone number is 801-587-1234.
2) Hemodialysis: Continue her usual dialysis for end-stage renal disease with the South Region Dialysis. Her dialysis days are Tuesday, Thursday, Saturday.
3) Nephrology Follow-up: Her facility should arrange for follow-up with her nephrologist to discuss current darbepoetin therapy and future plans along with consideration of further work-up of her secondary hyperparathyroidism.

BACKGROUND:

1. T9 to T11 burst fracture.

The patient actually had presented to an outside ER 2-3 weeks previous for weakness but no fractures were identified at that time. She was discharged to a skilled nursing facility at that time, and presented to our ER for worsening lower extremity weakness and numbness, and worsening urinary and fecal incontinence

Here the old T9 to T11 burst fractures were identified. The patient was taken to the OR by Orthopedic Spine for a T6 to L2 posterior spinal fusion, foraminectomy with foraminal decompression, and spinal canal decompression.

The patient's exam improved significantly since admission. Compared to presentation on admission, the patient regained plantar flexion, knee exam improved from 2+ to 3+ bilaterally, although hip exam was still 1+ bilaterally. She had regained sensation to pinprick to the waist and also the area on her right side that had been previously numb and quite painful was almost resolved.

PROCEDURES:

T6-L2 posterior spinal fusion with foraminectomy with foraminal decompression, and spinal canal decompression.

VITALS	BP	Pulse	Respirations	Temp	SaO2
5/4/2012	**134/86**	**86**	**16**	**98.1 F**	**89% on RA**

PHYSICAL EXAM: Improvement in neurological exam noted above. Back incisions without erythema or drainage.

LABS		Value	Normal Range
4/28/2012	PTH	585	15-65
5/4/2012	Calcium	7.6	8.4-10.2
5/3/2012	Phosphate	4.2	2.4-4.3
4/28/2012	B12	592	210-911
4/28/2012	Folate	24.1	5.4-40
5/3/2012	Vitamin D, 25-Hydroxy	9	30-80

IMAGING:
Multiple studies (MRI and CT) cumulatively showing acute to subacute burst fracture T9-T11 resulting in moderate central canal stenosis and severe neural foraminal narrowing bilaterally. Prior MRI did not show any definite marrow infiltrative process at this level, but the degree of bone loss seen on concurrent thoracic spine CT is concerning for metastatic disease or primary bone lesion. However, no definite marrow-replacing processes seen.

Echocardiogram on 04/29/2012: Impression:
1. Mild LVH.
2. Lower normal LV systolic function (EF of 50 to 55%)
3. Probable right atrial thrombus.
4. No aortic stenosis.
5. Small pericardial effusion.
6. No evidence of tamponade.
7. Physiology; atherosclerosis of the ascending aorta. Frequent ectopy was present throughout the exam.

Intraoperative TEE during posterior thoracic spinal fusion: Normal RV systolic function. LVEF of 50%. There is a central venous catheter seen in the right atrium, extending approximately 5 cm past the RA/SVC junction. The tip of the dialysis catheter can be seen in the right atrium as well, and there is a long, thin, mobile echodensity (3 cm in length) consistent with thrombus attached to the end of the catheter.

HOSPITAL VACCINATIONS: None

ASSESSMENT

DISCHARGE DIAGNOSIS:
1. T9 to T11 burst fracture, nerve root decompression, cord decompression, laminectomy, foraminectomy.
2. Posterior fusion T6 through L2.
3. Pain

CHRONIC DIAGNOSES:
1. End-Stage Renal Disease
2. Diabetes, Type 2
3. Coronary Artery Disease, status post MI, CVA, and TIA
4. COPD
5. Anemia

CONDITION: Stable.

RECOMMENDATIONS

1) Thoracic Spinal Fractures: Postoperative pain was significant though the patient was weaned to oral narcotics. However, she should start physical therapy and occupational therapy as soon as possible and inpatient rehab is recommended. The patient was unable to directly transfer to inpatient rehabilitation due lack of exercise tolerance. Newroads Skilled Nursing Center should call our facility for reevaluation for inpatient rehab in 2 to 3 weeks when she can participate in the 3 hours of daily therapy, Jennifer March at phone number 801-581-1234.

2) End-stage renal disease: No changes to chronic hemodialysis. However the patient's anemia was worsened by acute blood loss. She was started on darbepoetin as an inpatient. Her secondary hyperparathyroidism may warrant further work-up.

3) Sensitivity to narcotics: The post-operative course was remarkable for pain. The patient was hypoxic while on IV narcotics. Similarly, she had a hypotensive episode during dialysis while on narcotics.

4) Diabetes: The patient did not require Lantus as an inpatient. We recommend keeping the patient on sliding scale insulin alone for the time being.

Patient Preferences/Priorities/Goal/(Advanced Directives):

1) Prior to this entire episode, patient lived independently at home. Patient desires to regain that independence after rehab.

2) Patient is full code. However, no prolonged life support in the case of severe injury/illness.

(Medications On Next Page)

ALLERGIES: None	
DISCHARGE MEDICATIONS	
Continued: 1. Aspirin 81 mg p.o. daily. 2. Calcium carbonate 500 mg p.o. t.i.d. with meals. 3. Carvedilol 12.5 mg p.o. b.i.d. 4. Cholecalciferol 50,000 units q. week for a total of 8 weeks followed by cholecalciferol 2000 units p.o. daily. 5. Advair 250/50 mcg 1 puff b.i.d. 6. Guaifenesin 600 mg 1 tablet p.o. b.i.d. 7. Insulin aspart sliding scale, give 2 units for every 50 above 150. Call physician if greater than 400 or less than 60.	**New:** 1. Darbepoetin alfa 40 mcg subcutaneously q. week for 4 weeks due to severe anemia post-operatively followed-by transfusion. To be reassessed by nephrologist. 2. Cinacalcet 30 mg p.o. daily for hyperparathyroidism. 3. Sevelamer 1600 mg p.o. t.i.d. with meals for ESRD hyperphosphatemia. 4. Oxycodone 10 mg p.o. q. 4 hours p.r.n. post-operative pain. 5. Docusate/senna 50/8.6 mg 1 tablet p.o. b.i.d. p.r.n. constipation. 6. Tylenol 1 g p.o. t.i.d. for 2 weeks for pain (limit total acetaminophen dose to 4g total per 24 hours).
Changed: None	**Discontinued:** 1. Discontinue tizanidine due to known etiology of spinal injury and repair. 2. Hold ramipril and reassess. Patient had hypotensive episode (80/50) during dialysis. If the patient becomes hypertensive, she may resume ramipril 5 mg p.o. daily. 3. Discontinue lantus insulin as patient now doing well on short-acting insulin alone.